



Michigan Department of
TREASURY

Engagement. Service. Improvement.

State of Michigan Investment Board Meeting

September 16, 2021

Executive Summary & Performance Review

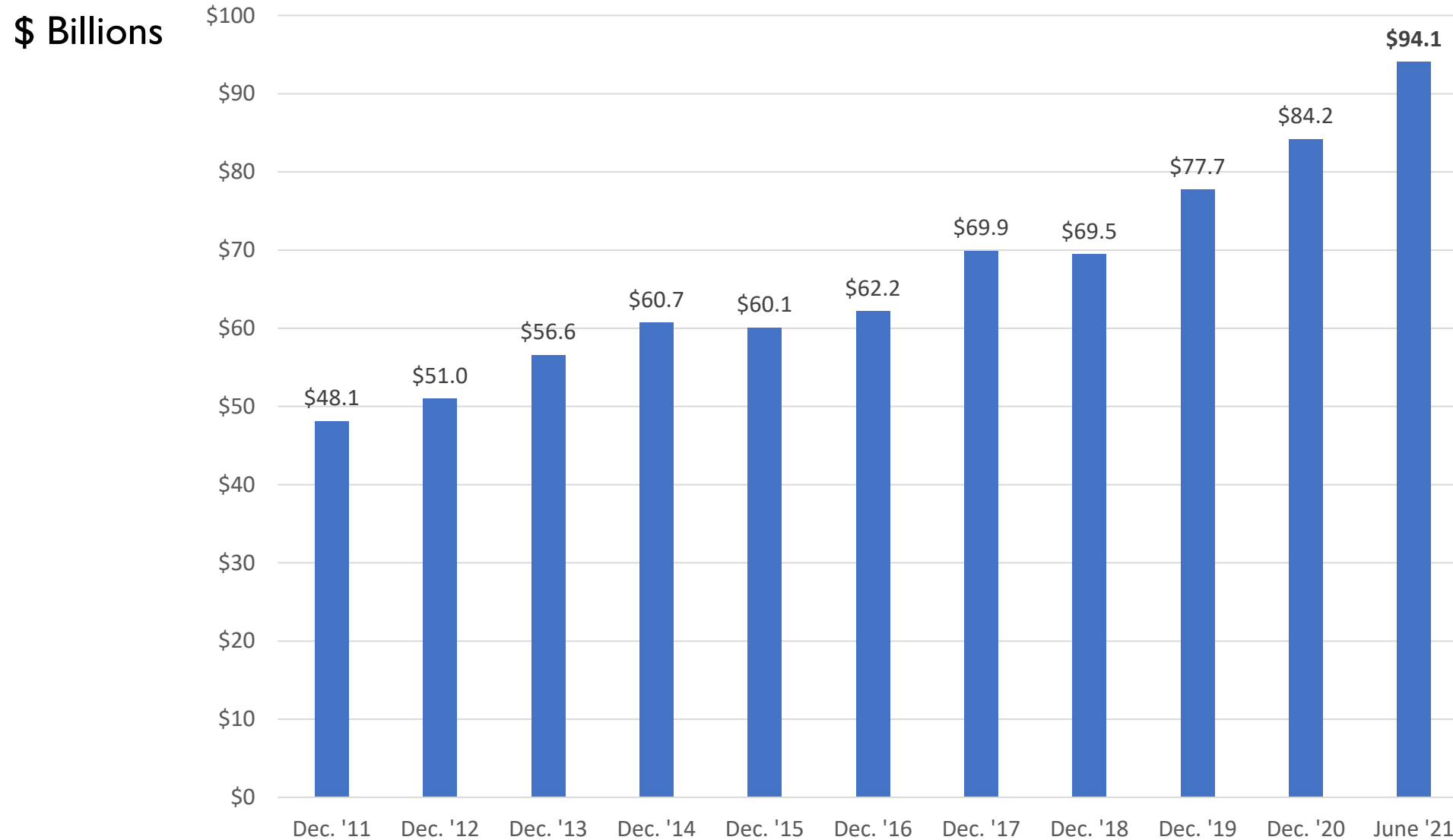
Jon M. Braeutigam
Chief Investment Officer
Bureau of Investments

Performance

MPSERS Plan 6/30/2021	1-Year	3-Year	5-Year	7-Year	10-Year
Annualized Returns	33.4%	12.9%	12.8%	10.1%	10.4%
Policy Returns	26.4%	12.2%	12.0%	9.9%	10.2%
Peer Median Returns*	27.3%	11.4%	11.1%	8.7%	9.2%
Percentile Rank Vs. Peers*	8	14	10	5	10

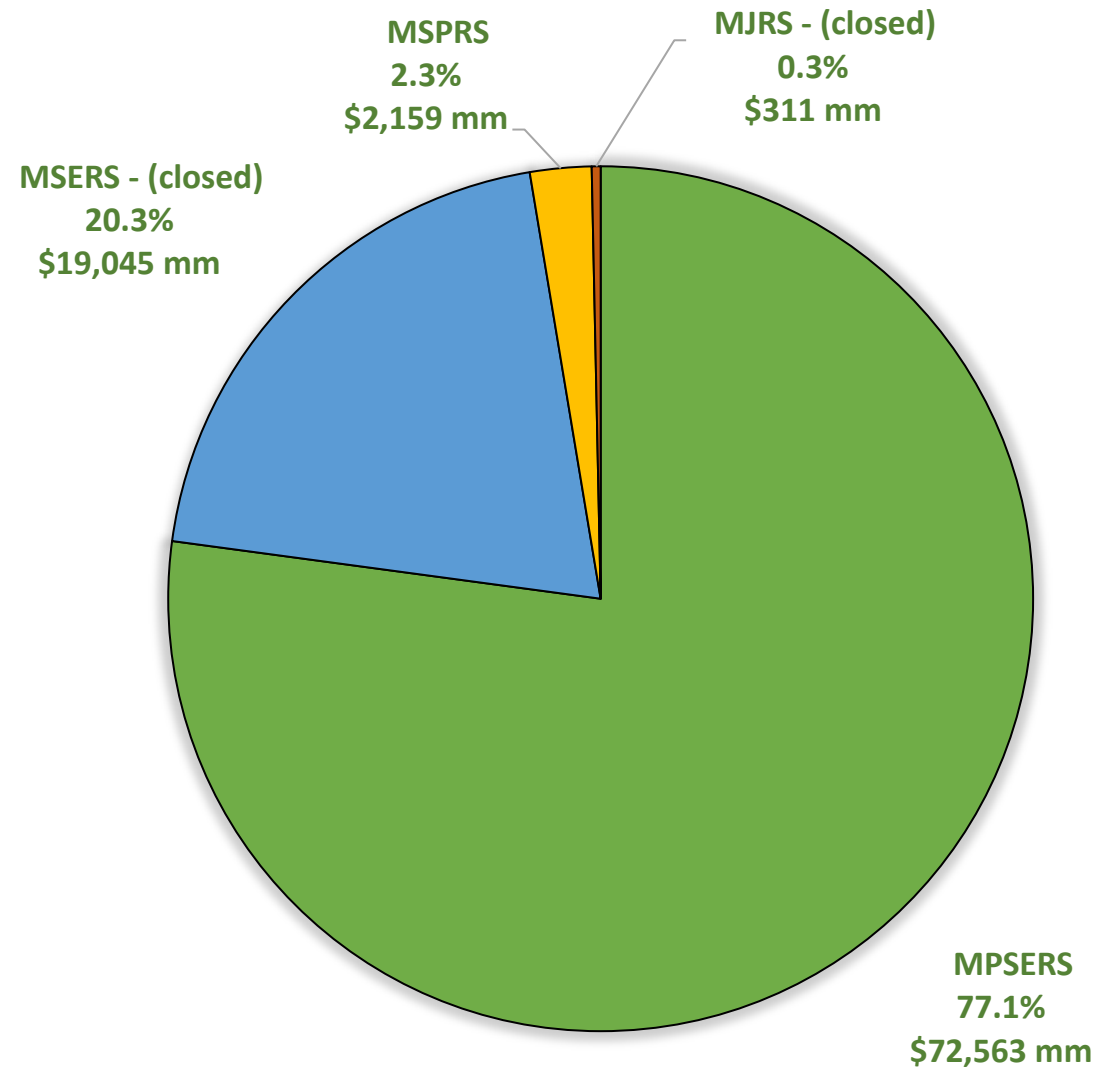
*State Street Universe greater than \$10 billion.

Market Value



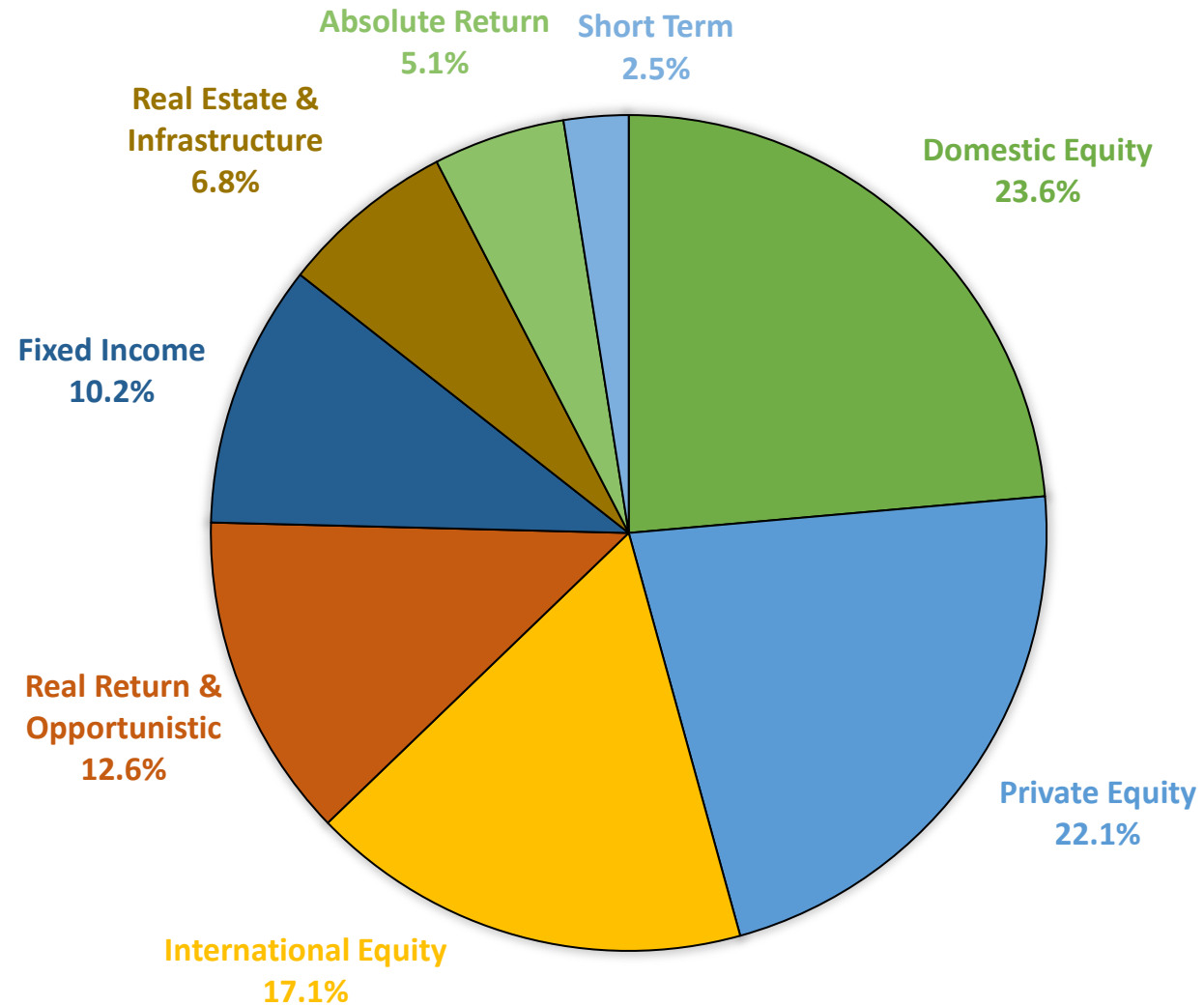
Market Value by Plan

June 30, 2021



Asset Allocation

June 30, 2021



Asset Allocation Targets

Asset Allocation Targets									
	MPSERS		MSERS		MSPRS		MJRS		SMRS
Asset Class	06/30/21	Target*	06/30/21	Target*	06/30/21	Target*	06/30/21	Target*	Ranges
Domestic Equity	23.6%	25.0%	23.6%	25.0%	23.6%	25.0%	23.7%	25.0%	17%-32%
Private Equity	22.1%	16.0%	22.2%	16.0%	22.2%	16.0%	22.3%	16.0%	13%-25%
International Equity	17.1%	15.0%	17.1%	15.0%	17.1%	15.0%	17.1%	15.0%	12%-22%
Real Return & Opportunistic	12.6%	12.5%	12.7%	12.5%	12.7%	12.5%	12.7%	12.5%	8%-18%
Long Term Fixed Income	10.2%	10.5%	10.3%	10.5%	10.2%	10.5%	10.3%	10.5%	8%-18%
Real Estate & Infrastructure	6.8%	10.0%	6.8%	10.0%	6.8%	10.0%	6.8%	10.0%	8%-18%
Absolute Return	5.1%	9.0%	5.1%	9.0%	5.1%	9.0%	5.2%	9.0%	5%-11%
Short Term Fixed Income	2.5%	2.0%	2.2%	2.0%	2.3%	2.0%	1.9%	2.0%	1%-8%
Total	100.0%	100%	100%	100%	100%	100%	100%	100%	100%
*Complies with basket clause and international restrictions.									

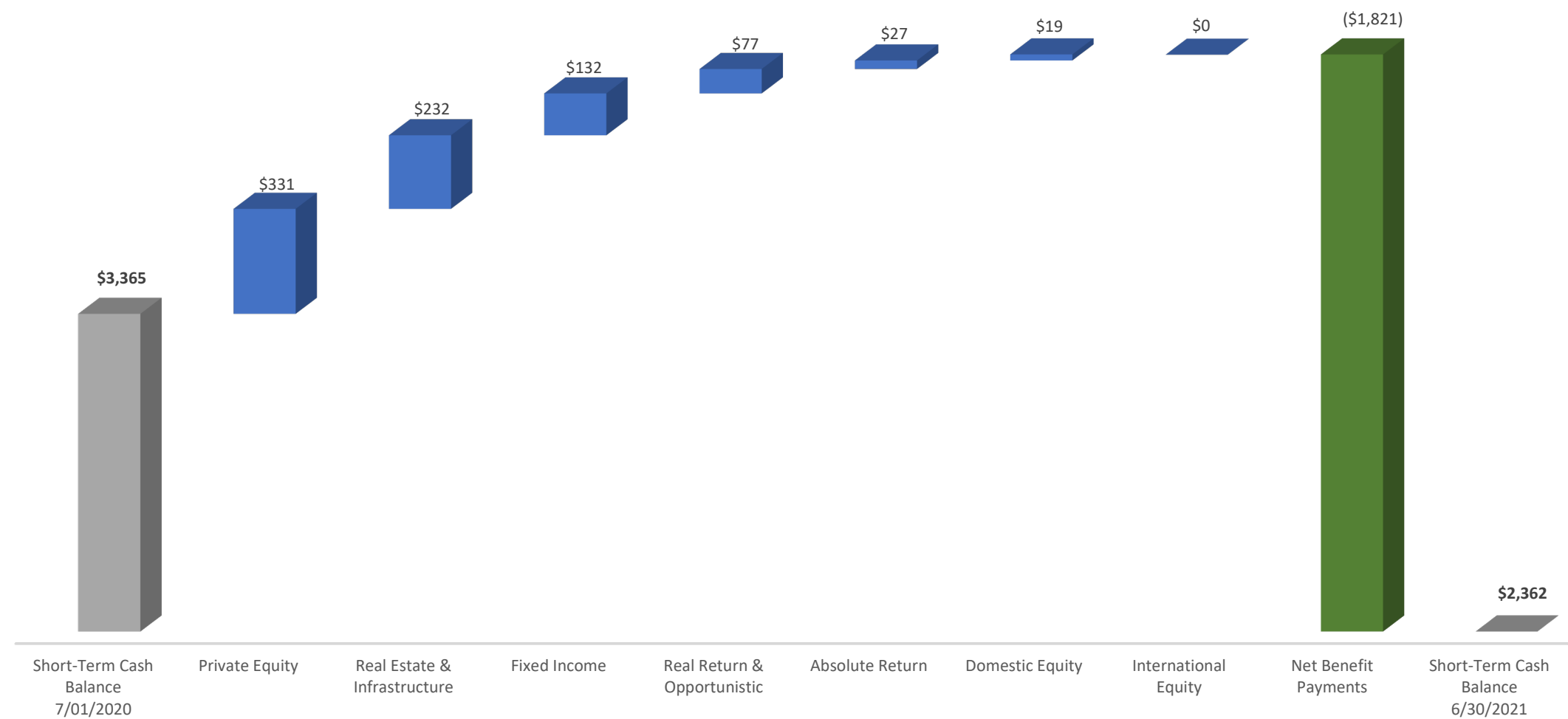
Asset Allocation Ranges

June 30, 2021



*Complies with basket clause and international restrictions.

Sources and Uses of Cash



A negative number in an asset category indicates a use of cash, a positive number indicates a source of cash. Dollars in millions

New Private Market Commitments

- 20 new commitments for the quarter
- \$1.6 billion committed for the quarter
- \$4.1 billion committed fiscal year to date
- In line with normal pacing plans

Market Review & Outlook

Gregory J. Parker, CFA
Director of Investments – Public Markets
Director of Asset Allocation
Bureau of Investments

Annual Total Returns of Key Asset Classes 2001 - 2020

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
Best ↑	Corp. Bonds	Gov't Bonds	Int'l Equity	Int'l Equity	Real Estate	Int'l Equity	Int'l Equity	Gov't Bonds	Int'l Equity	U.S. Equity	Real Estate	Int'l Equity	U.S. Equity	U.S. Equity	Real Estate	U.S. Equity	Int'l Equity	Real Estate	U.S. Equity	U.S. Equity	Best ↑
	10.40%	11.50%	40.82%	20.90%	20.06%	26.65%	16.65%	12.38%	41.44%	16.38%	14.26%	16.83%	32.80%	13.08%	13.32%	11.93%	27.19%	6.71%	30.90%	17.92%	
	Real Estate	Corp. Bonds	U.S. Equity	Real Estate	Int'l Equity	Real Estate	Real Estate	Cash	U.S. Equity	Real Estate	Gov't Bonds	U.S. Equity	Int'l Equity	Real Estate	U.S. Equity	Real Estate	U.S. Equity	Inflation	Int'l Equity	Int'l Equity	
	7.28%	10.52%	29.58%	14.48%	16.62%	16.59%	15.84%	2.05%	27.24%	13.11%	9.02%	16.17%	15.29%	11.81%	1.01%	7.97%	21.13%	1.91%	22.13%	10.65%	
	Gov't Bonds	Real Estate	Hedge Funds	U.S. Equity	U.S. Equity	U.S. Equity	Gov't Bonds	Inflation	Corp. Bonds	Int'l Equity	Corp. Bonds	Real Estate	Real Estate	Corp. Bonds	Gov't Bonds	Corp. Bonds	Real Estate	Cash	Corp. Bonds	Corp. Bonds	
	7.24%	6.74%	9.01%	11.78%	5.65%	15.34%	8.67%	0.10%	16.05%	11.15%	8.35%	10.54%	10.99%	7.53%	0.86%	5.63%	6.96%	1.88%	14.54%	9.89%	
	Cash	Hedge Funds	Real Estate	Hedge Funds	Hedge Funds	Hedge Funds	Hedge Funds	Corp. Bonds	Hedge Funds	Corp. Bonds	Inflation	Corp. Bonds	Hedge Funds	Gov't Bonds	Inflation	Int'l Equity	Corp. Bonds	Gov't Bonds	Gov't Bonds	Gov't Bonds	
	4.43%	3.57%	8.99%	5.83%	5.13%	9.21%	7.68%	-3.07%	9.65%	8.46%	2.96%	9.37%	7.70%	4.92%	0.66%	4.50%	6.42%	0.88%	6.83%	7.94%	
	Hedge Funds	Inflation	Corp. Bonds	Corp. Bonds	Inflation	Cash	U.S. Equity	Real Estate	Inflation	Gov't Bonds	U.S. Equity	Hedge Funds	Inflation	Hedge Funds	Hedge Funds	Inflation	Hedge Funds	Hedge Funds	Real Estate	Hedge Funds	
	3.11%	2.39%	7.69%	5.25%	3.42%	4.81%	5.47%	-6.46%	2.72%	5.52%	1.75%	4.22%	1.49%	3.14%	0.37%	2.09%	3.88%	-1.05%	6.42%	4.75%	
	Inflation	Cash	Gov't Bonds	Gov't Bonds	Cash	Corp. Bonds	Corp. Bonds	Hedge Funds	Cash	Hedge Funds	Cash	Gov't Bonds	Cash	Inflation	Cash	Hedge Funds	Gov't Bonds	Corp. Bonds	Hedge Funds	Real Estate	
	1.55%	1.79%	2.36%	3.48%	3.06%	4.27%	5.10%	-19.86%	0.19%	5.07%	0.10%	2.02%	0.07%	0.68%	0.01%	1.89%	2.30%	-2.51%	4.40%	1.60%	
	U.S. Equity	Int'l Equity	Inflation	Inflation	Gov't Bonds	Gov't Bonds	Cash	U.S. Equity	Gov't Bonds	Inflation	Hedge Funds	Inflation	Corp. Bonds	Cash	Corp. Bonds	Gov't Bonds	Inflation	U.S. Equity	Inflation	Inflation	
	-10.64%	-14.95%	1.88%	3.25%	2.65%	3.46%	5.03%	-36.72%	-2.19%	1.50%	-3.55%	1.70%	-2.01%	0.04%	-0.77%	1.05%	2.12%	-4.96%	2.29%	1.40%	
	Int'l Equity	U.S. Equity	Cash	Cash	Corp. Bonds	Inflation	Inflation	Int'l Equity	Real Estate	Cash	Int'l Equity	Cash	Gov't Bonds	Int'l Equity	Int'l Equity	Cash	Cash	Int'l Equity	Cash	Cash	
Worst ↓	-19.74%	-21.30%	1.16%	1.33%	1.95%	2.55%	4.06%	-45.52%	-16.86%	0.13%	-13.71%	0.11%	-2.60%	-3.87%	-5.67%	0.27%	0.84%	-14.20%	2.28%	0.45%	Worst ↓

Annualized Returns 2001 - 2020																				
Return		Cash		Infl.		Hedge		Gov't.		Int'l.		Corp.		U.S. Eq.		R.E.				Return
Risk		1.50%		2.04%		3.19%		4.34%		5.69%		6.10%		7.71%		8.19%				Risk
		0.83%		1.34%		5.28%		4.61%		19.88%		5.60%		17.32%		4.61%				

- Hedge Funds are represented by the HFRI FOF Conservative Index
 - Inflation is represented by the U.S. Consumer Price Index (SA)
 - International Equity is represented by the MSCI - AC World EX-USA Index
 - Cash is represented by 30-day T-Bills

- U.S. Equity is represented by the S&P 1500 Index
 - Real Estate is represented by the NCREIF National Property Index
 - Corporate Bonds are represented by the BBG Barclays - U.S. Corp. Inv. Gd. Index
 - Government Bonds are represented by the BBG Barclays - U.S. Government Index

Capital Markets

Return and Risk Assumptions

MPSERS Plan	Assumed Return* (Arithmetic)	Standard Deviation*	Trailing 10-year (Benchmark**)
Private Equity	10.9%	25.0%	16.9%
International Equity	8.9%	21.5%	5.6%
Real Ret/Opportunistic	8.0%	9.5%	7.2%
Domestic Equity	7.3%	18.2%	14.6%
Real Estate (Core)	7.5%	15.0%	7.4%
Absolute Return	4.9%	9.0%	3.1%
Long-Term Fixed Income	2.0%	4.0%	3.4%
Short-Term	1.7%	1.5%	0.6%

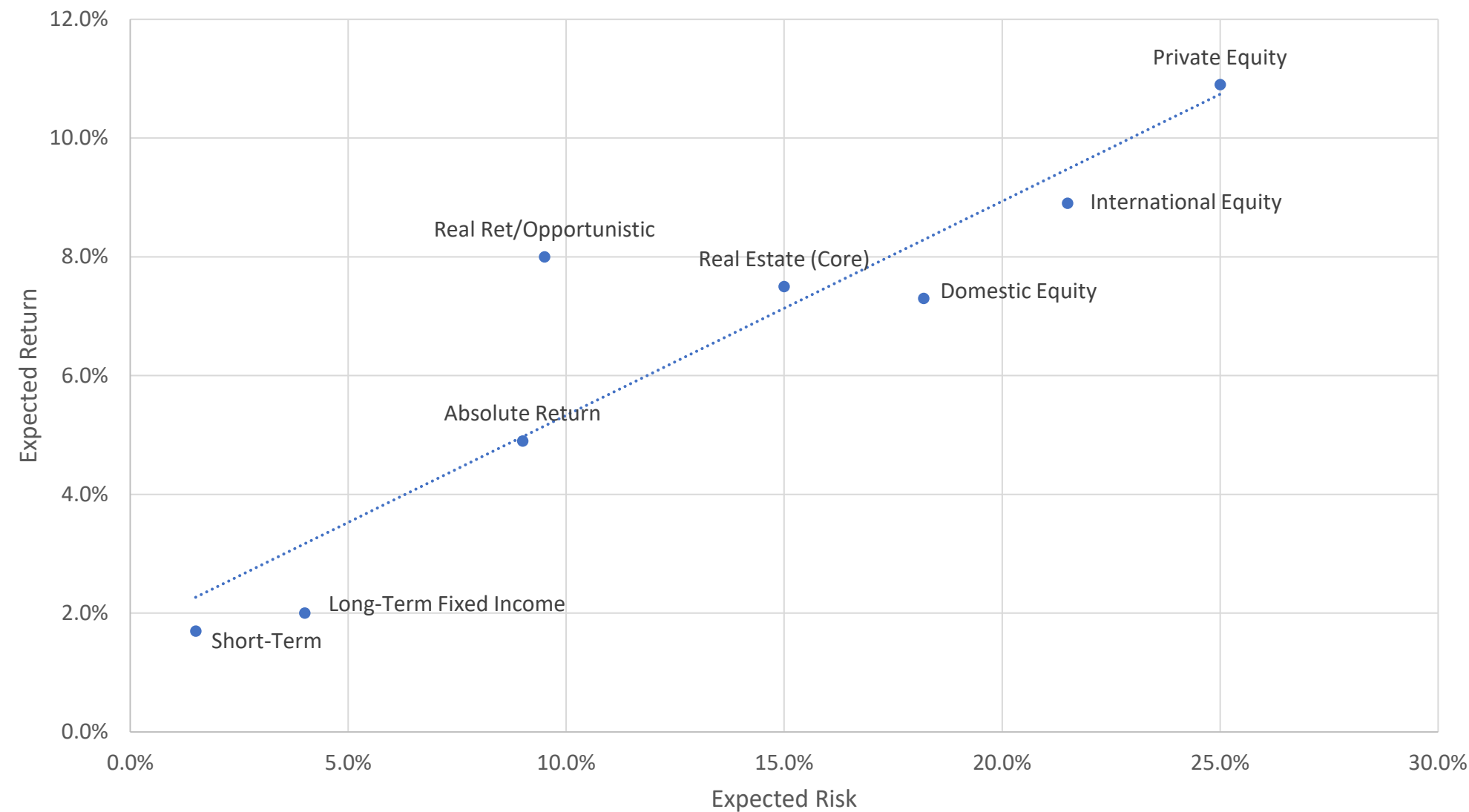
* Aon Investment Consultants 2021 Long-Term Return/Risk Assumptions

** Investment Policy Statement; Annualized Returns

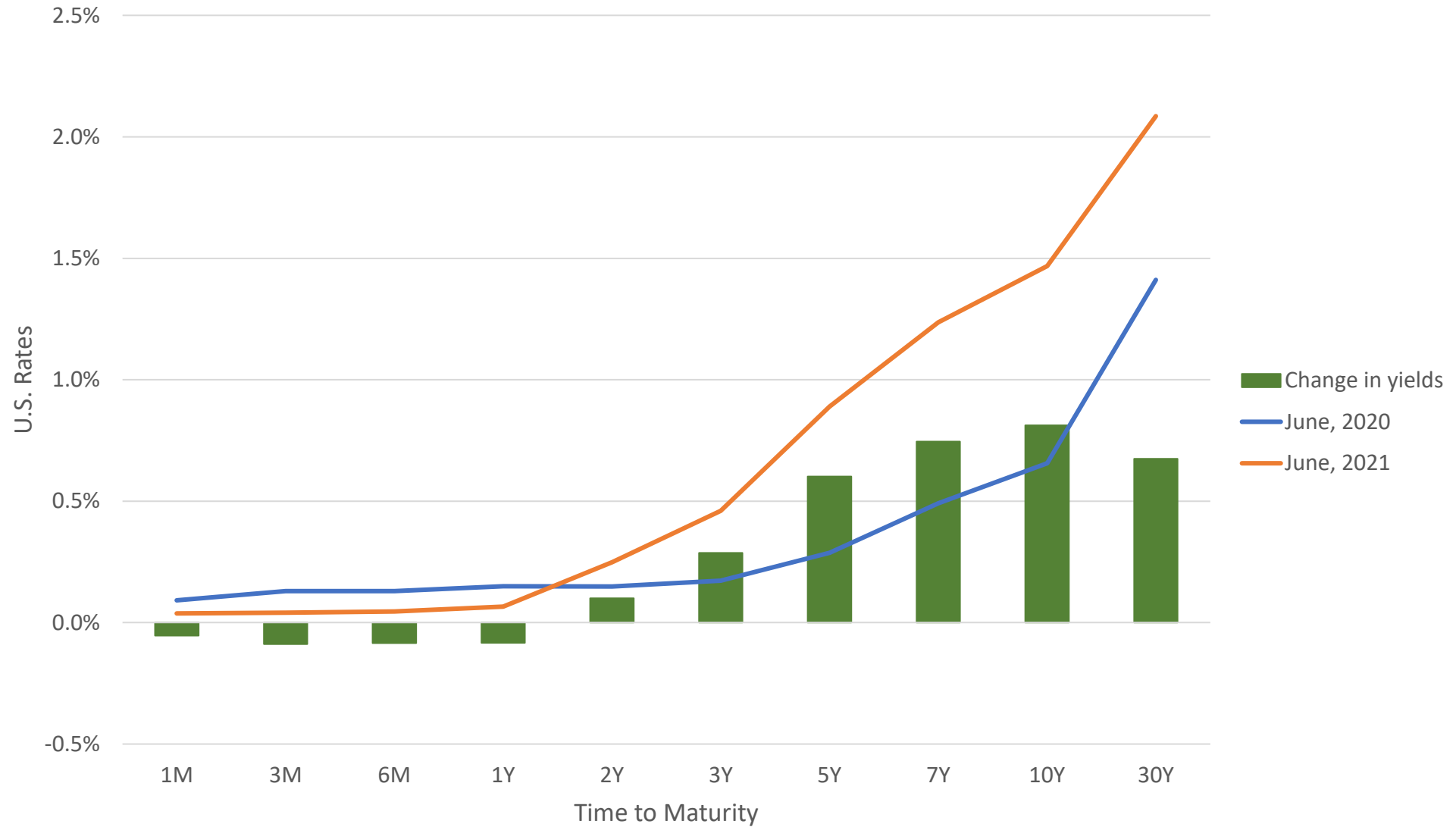
*** Actual investments may differ due to changing conditions and the availability of new information

Capital Markets

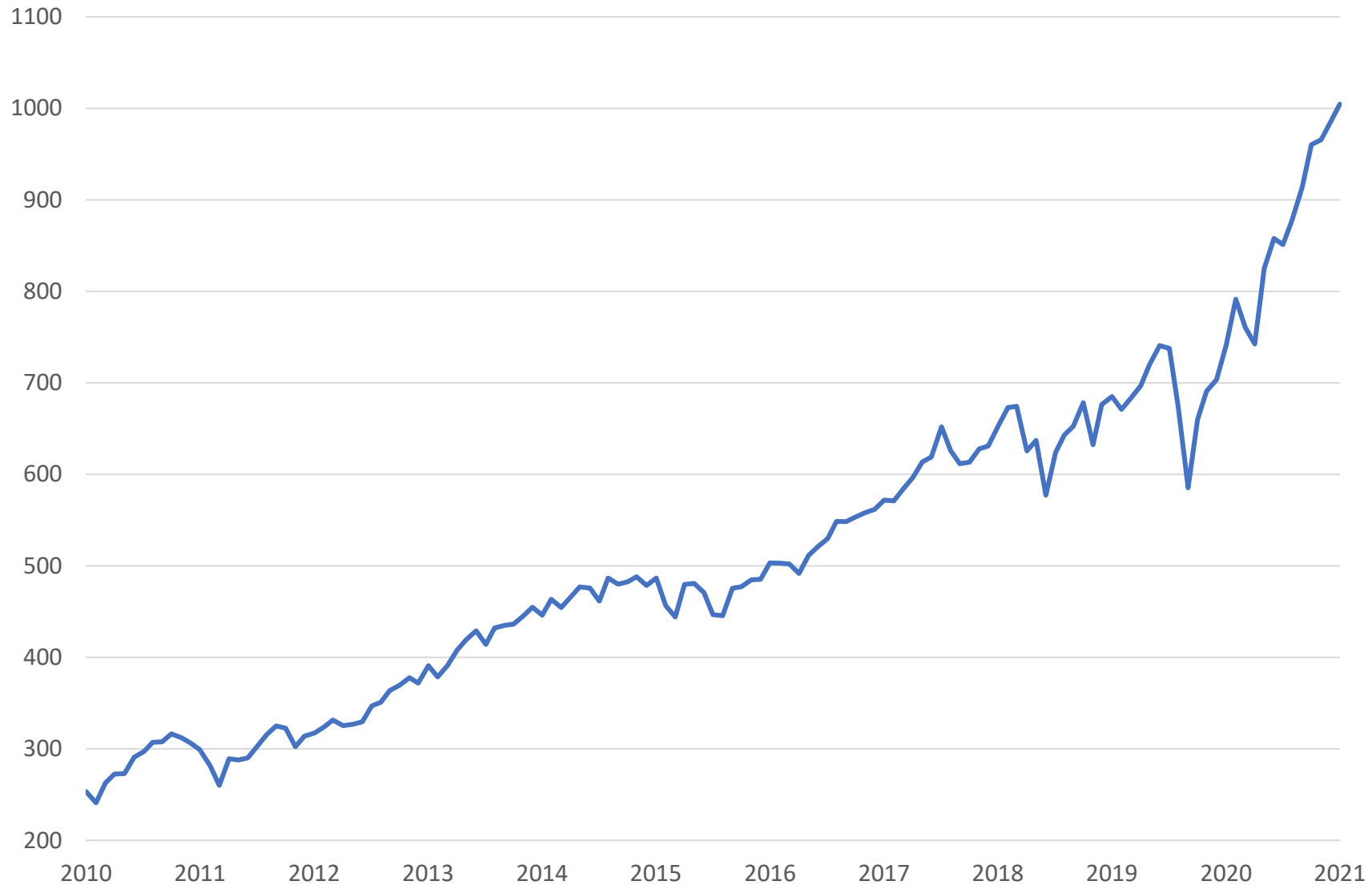
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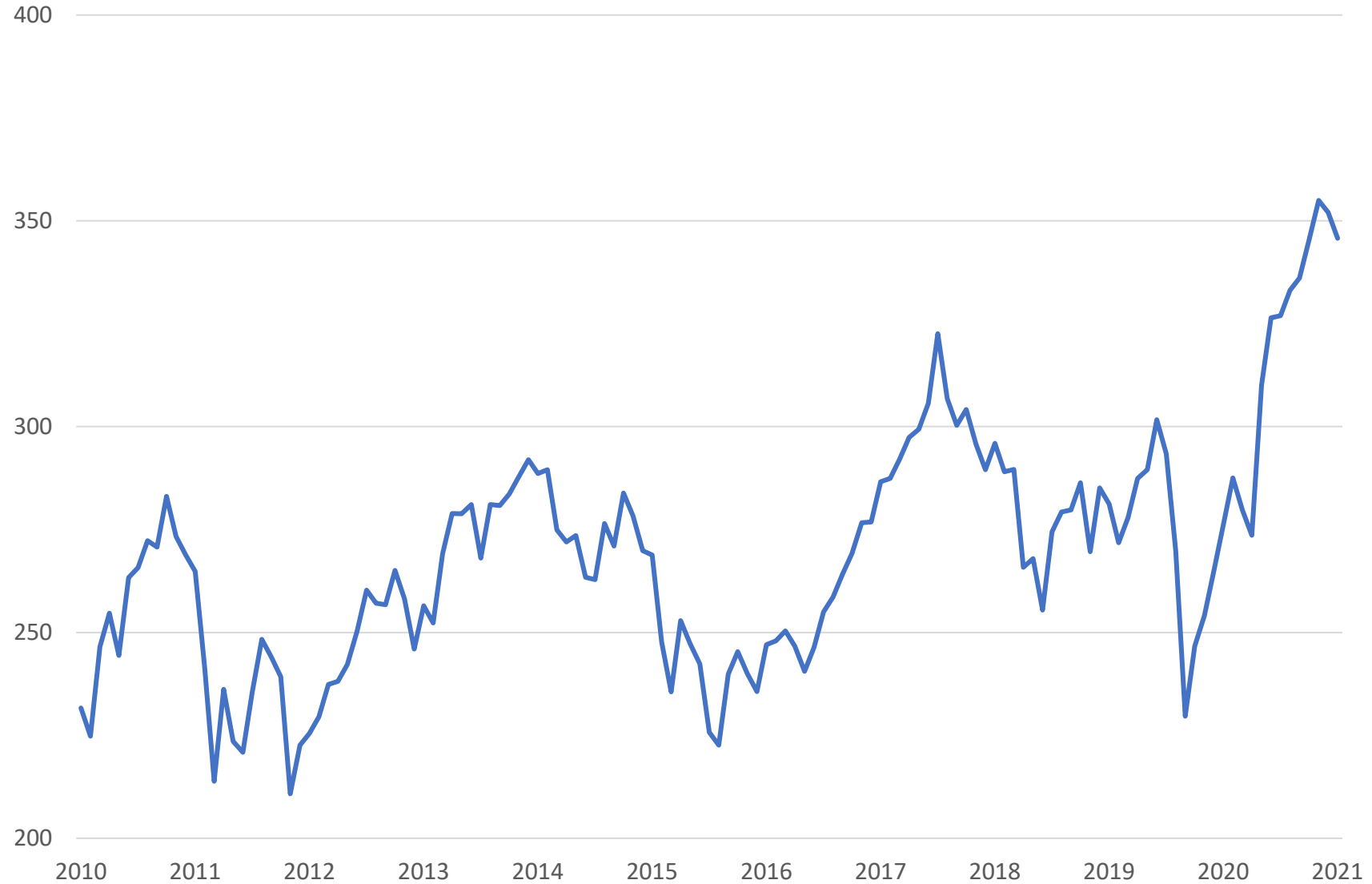
US Treasury Curves



S&P Composite 1500 Index



MSCI ACWI ex USA Index

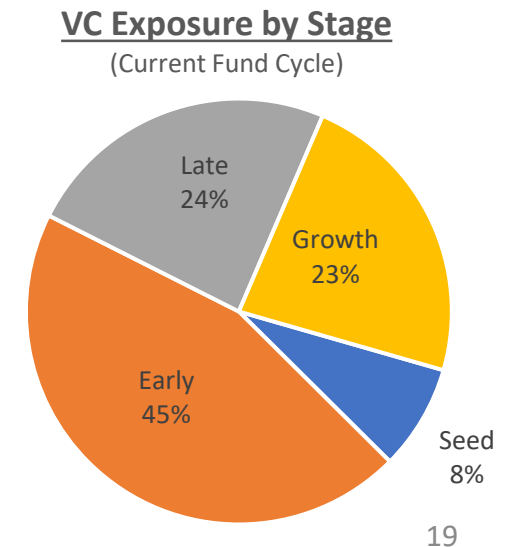
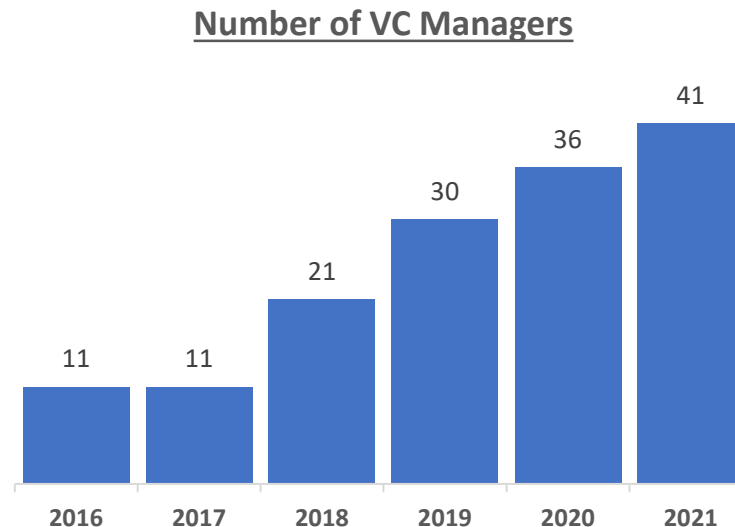
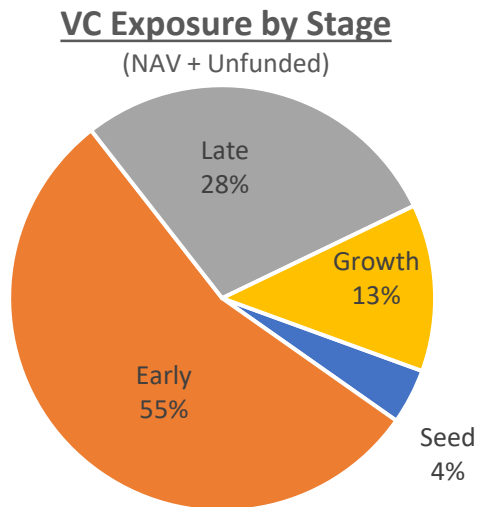


Venture Capital Review

Travis Haney & Ryan Rathman
Senior Investment Managers

The Venture Capital Division (“VCD”) Story

- SMRS has been investing in venture capital since 1983. VCD was spun out from broader Private Equity in 2016. A dedicated team underscored the import of access, focus, time, and relationships.
- SMRS’ exposure to VC had been almost exclusively early stage but as the industry evolved, managers broadened their mandates to invest in later-stage opportunities.
- SMRS continues to have a bias toward early stage with a focus on emerging managers, but VCD believes that there is value in thoughtful growth investing and continues to invest with its core platform managers while selectively investing with specialized growth managers.



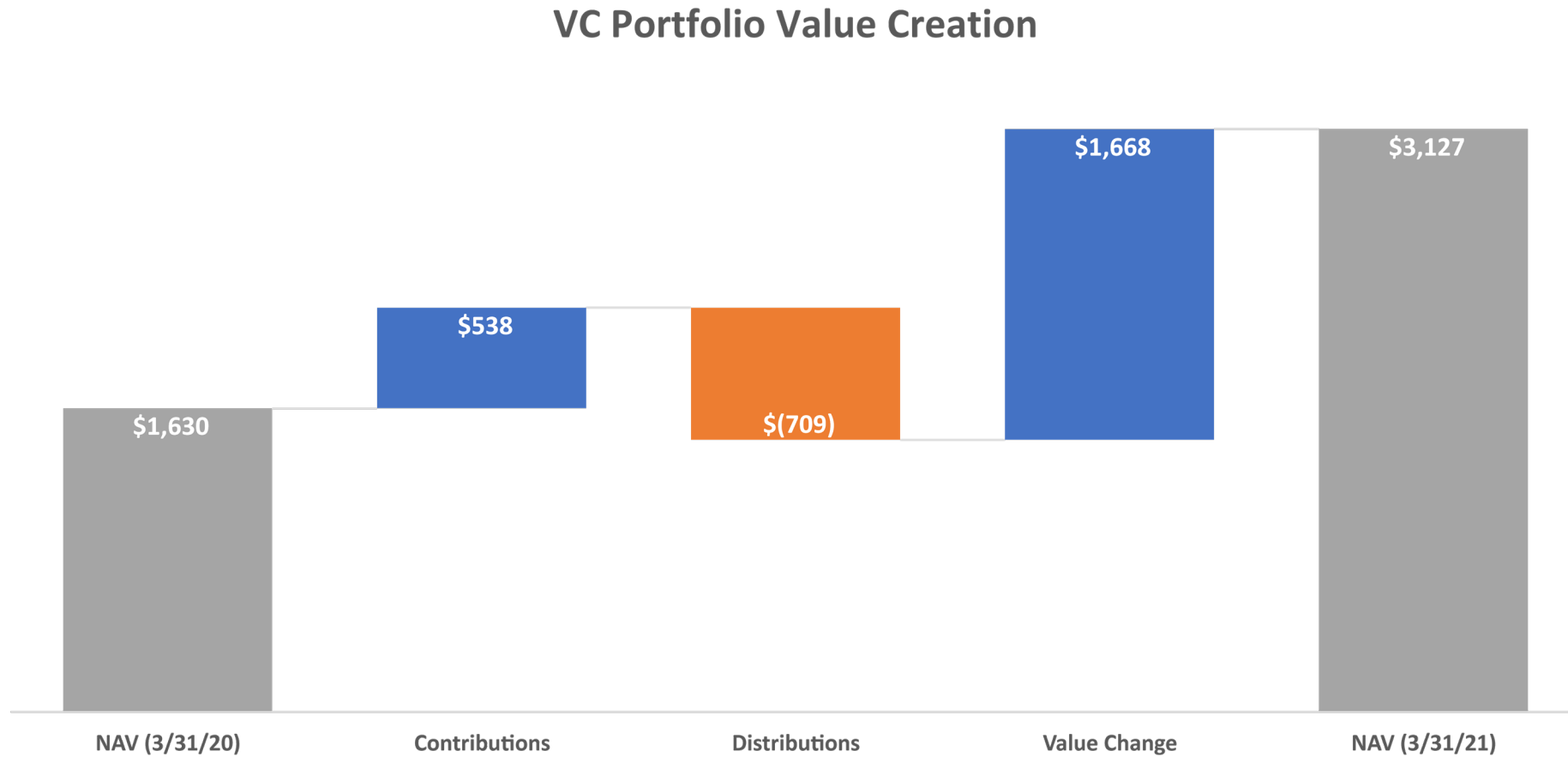
Private Equity Performance

MPSERS Plan (6/30/21)	1-Year	3-Years	5-Years	7-Years	10-Years
Annualized Returns	54.7%	20.7%	18.8%	15.8%	15.5%
PE Benchmark Returns	60.9%	20.2%	19.7%	17.0%	17.3%
Peer Median Returns	32.6%	9.6%	10.9%	9.9%	10.6%
Percentile Rank vs. Peers*	4	5	10	13	8
Venture Capital Returns	105.9%	36.6%	27.3%	---	---
PE/VC Co-invest Returns**	62.2%	23.9%	23.5%	---	---

*State Street Universe greater than \$1 billion

**Co-Investment portfolio managed by VCD; Current NAV breakdown: LBO 70% VC 25% Credit 5%

Portfolio Value Creation



Other Considerations

Potential areas of expansion

- Sector-specific opportunities – Consumer, Proptech, Fintech, Security
- International exposure
- Thoughtful and selective on unique growth opportunities
- Diverse managers with differentiated sourcing and knowledge
- Co-invest as a proactive pillar of the strategy

Guest Speaker

Jim is Managing General Partner at Greenspring Associates and has over 20 years of venture capital investment experience. Prior to joining Greenspring Associates, Jim held senior investment positions at Commonfund Capital and Pfizer, where he helped lead venture capital manager selection, due diligence, and monitoring.

Jim is a cum laude graduate of Washington College where he received his degree in Economics and earned his MBA in Finance from Indiana University. Jim currently serves as a member or observer on several Limited Partner and portfolio company advisory boards.

